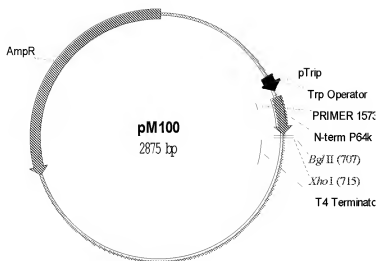
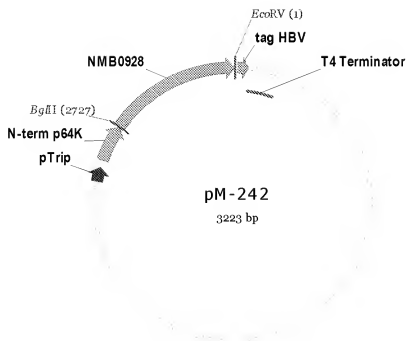


Figure 1**Figure 2**

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Figure 3

1 2



← NMB0928

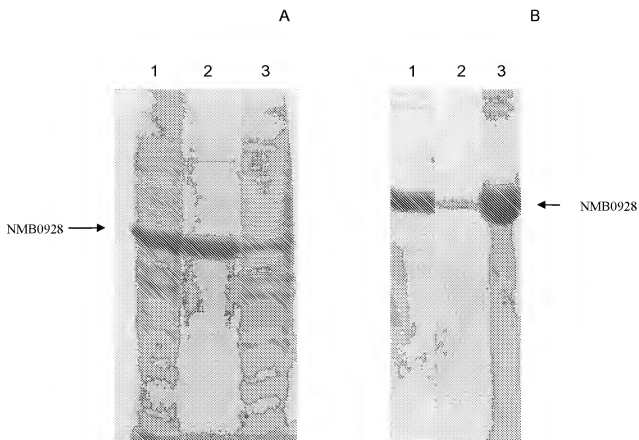
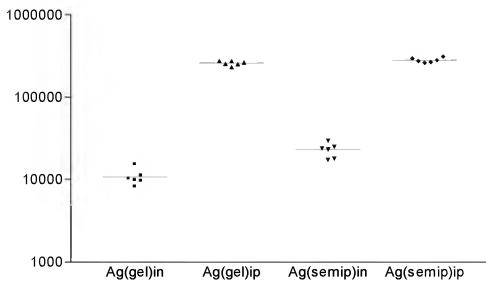
Figure 4**Figure 5**

Figure 6

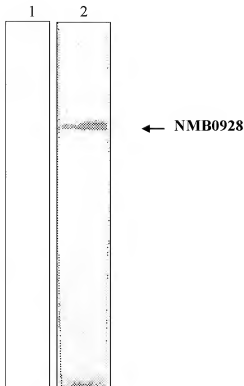


Figure 7

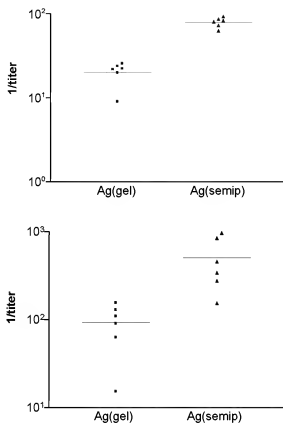


Figure 8

Neisseria meningitidis serogroup C

>*Neisseria meningitidis* PAM18:orf94 108496 109923 PIR:C81141
 hypothetical protein NMB0928 [imported] - *Neisseria*
 meningitidis (group B strain MD58)
 Length = 1428

Score = 1939 bits (978), Expect = 0.0
 Identities = 1038/1058 (98%)
 Strand = Plus / Plus

```
Query: 2      ggcagcaaaacogaacagcccaagctcgactaccaaaagcggctgcacogcgtgatcaaa 61
             |||
Sbjct: 364    ggcagcaaaacogaacagcccaagctcgactaccaaaagcggctgcacogcgtgatcaaa 423

Query: 62      cttgaagtcccaacctgatttgaacaaccccgaccgaaggaacctctacogcgtgocgtgc 121
             |||
```

Sbjct:	424	ctogaagtcocacactgatttgaacaaccocgcaccaaggcaaacctctaacgcgtcgctgcc	489
Query:	122	ggttcggggcgccgtccgcgcgcagcaatattggaaaaagcgcgcacaccccacgtccaacag	181
Sbjct:	484	ggttcggggcgccgtccgcgcgcagcagatttggaaaaagcgcgcacaccccgcgtccaacag	543
Query:	182	cctgcogatgcgcgaagtattgaaaagcgtcaaagtgctccgcctcgcagcgcgcagggcgc	241
Sbjct:	544	cctgcogatgcgcgaagtattgaaaagcgtcaaagtgctccgcctcgcagcgcgcagggcgc	603
Query:	242	caacgcgtggtcgttgtcgcgaaggcaagtctcctgcgcgaataatctggccgctcctgaaagcc	301
Sbjct:	604	caacgcgtggtcgttgtcgcgaaggcaagtctcctgcgcgaataatctggccgctcctgaaagcc	663
Query:	302	ttttggcaggaaaaagcgccttogacatcaaatccgaagaaccgcocatcggacaaaaggaa	361
Sbjct:	664	ttttggcaggaaaaagcgccttogacatcaaatccgaagaaccgcocatcggacaaaaggaa	723
Query:	362	acogagtgggcggaaaaaagcgcgcacaaatcccccaagacagettgcgcgcctcttcgac	421
Sbjct:	724	acogagtgggcggaaaaaagcgcgcacaaatcccccaagacagettgcgcgcctcttcgac	783
Query:	422	aaagtgcgcttggggcgcatctactccacggcgagcgcgcacaaattcatcgtccgtatc	481
Sbjct:	784	acagtcgcttggggcgcatctactccacggcgagcgcgcacaaattcatcgtccgtatc	843
Query:	482	gaacaggcgcaaaaacggcggtttocgatctcttctgcccaaaaagccatgaagaagtg	541
Sbjct:	844	gaacaggcgcaaaaacggcggtttocgatctcttctgcccaaaaagccatgaagaagtg	903
Query:	542	tacggcggcgaagaacgaacagacogtatggcagccctccocgtccgatcccaacctc	601
Sbjct:	904	tacggcggcgaagaacgaacagacogtatggcagccctccocgtccgatcccaacctc	963
Query:	602	gaagccgcgtttcctgacgcgctttatgcaatatattggcggttgacgcagcagcaggcgaa	661
Sbjct:	964	gaagccgcgtttcctgacgcgctttatgcaatatattggcggttgacgcagcagcaggcgaa	1023
Query:	662	aacgcatacggc caaaaaaaaaactacccttcocgcgcgcacgaataatggcgcgatatogaagc	721
Sbjct:	1024	aacgcatacggc caaaaaaaaaacgcgcgcgcacgaataatggcgcgatatogaagc	1083
Query:	722	aaaagcctgattgtcttttggcgactaaggcagaaactggcgcgcaacggtgtctgcgcctc	781
Sbjct:	1084	aaaagcctgattgtcttttggcgactaaggcagaaactggcgcgcaacggtgtctgcgcctc	1143
Query:	782	gaccgcatacggcgctgacgctgttcggttcaaaacacgcgaacgcgcacgcctctcgtgctcaa	841
Sbjct:	1144	gaccgcatacggcgctgacgctgttcggttcaaaacacgcgaacgcgcacgcctctcgtgctcaa	1203
Query:	842	aaagcccccgaagcaaaagcaatgcagtttacogaacaaaaaacccggcctgttcaaacgcctg	901
Sbjct:	1204	aaagcccccgaagcaaaagcaatgcagtttacogaacaaaaaacccggcctgttcaaacgcctg	1263
Query:	902	ctgggcgaaggcgaaagcggagaaacctgcgcgaacgcgcgcgaactgattgtctatgcagaa	961

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Sbjct: 1264 ctgggcaaaaggcaaaagcggagaaaacctgcogaaacagcoggaactgattgtotatgcogag 1323

Query: 962 cctgtgcgaacagcgtgcgcacgtcgtgcacaaagaagcgcagcgcacatgcogcgc 1021

Sbjct: 1324 cctgtgcgaacagcgtgcgcacgtcgtgcacaaagaagcgcagcgcacatgcogcgc 1383

Query: 1022 aaagaagcgcacgcattattgggcaaaactccattcoga 1059

Sbjct: 1384 aaagaagcgcacgcattattgggcaaaactccattcoga 1421

Neisseria meningitidis serogroup A

>Nmeningitidis Z2491.gi.737981.7 1073887 1072760 putative
 lipoprotein [Neisseria meningitidis Z2491]
 Length = 1128

Score = 1963 bits (990), Expect = 0.0
 Identities = 1041/1058 (98%)
 Strand = Plus / Plus

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Sbjct: 61 ggcagcaaaaacogaaacagcccaagctogactaccaaaagcoggtgcacogcgtgatcaaa 120

Query: 62 cttgaagtcccaactgatttgaaacaaacccogacaaagcgaacactctacogcgtgcgtgoc 121

Sbjct: 121 ctogaagtcccaactgatttgaaacaaacccogacaaagcgaacactctacogcgtgcgtgoc 180

Query: 122 ggttcggggc 181

Sbjct: 181 ggttcggggc 240

Query: 182 cctgcogcgtgc 241

Sbjct: 241 cctgcogcgtgc 300

Query: 242 caacgcctggcgtcgttgatgc 301

Sbjct: 301 caacgcctggcgtcgttgatgc 360

Query: 302 ttttggcaggcaaaaacgc 361

Sbjct: 361 ttttggcaggcaaaaacgc 420

Query: 362 acgcgcgtgggc 421

Sbjct: 421 acgcgcgtgggc 480

Query: 422 aaagtgcgcgttggc 481

Sbjct: 481 aaagtgcgcgttggc 540

Query: 482 gaacagggcgaaaaacgc 541

Sbjct: 541 gaacagggcgaaaaacgc 600

Query: 542 taacgggcgaaaaacgc 601

Sbjct: 601 taacgggcgaaaaacgc 660

Query: 602 gaagcogctttcctgaocgogctttatgcaatatttgggogttgaocggacagcaggogaa 661
 |||||||
 Sbjct: 661 gaagcogctttcctgaocgogctttatgcaatatttgggogttgaocggacagcaggogaa 720

Query: 662 aacgcacogggcaaaaaaacctaccctcccgccgcacaaagaaatggcogtatcgaagc 721
 |||||||
 Sbjct: 721 aacgcacogggcaaaaaaacctaccctcccgccgcacaaagaaatggcogtatcgaagc 780

Query: 722 aaaagocctgattgtcttttggogactaocggcagaaactgggogcgacocgtgctogcoctc 781
 |||||||
 Sbjct: 781 aaaagocctgattgtcttttggogactaocggcagaaactgggogcgacocgtgctogcoctc 840

Query: 782 gacgcacatogggctgacogctogtgggtcaaaacacoggaacgcaocgttctggtgctaa 841
 |||||||
 Sbjct: 841 gacgcacatogggctgacogctogtgggtcaaaacacoggaacgcaocgttctggtgctaa 900

Query: 842 aaagccocggaacgaaagcaatgcagttacogaaacaaaaacccggcctgttcaaacgocgt 901
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 Sbjct: 901 aaagccocggaacgaaagcaatgcagttacogaaacaaaaacccggcctgttcaaacgocgt 960

Query: 902 ctgggcaaaaggcaaaaggagaaacactgcogaaacagocggaactgattgtctatgcagaa 961
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 Sbjct: 961 ctgggcaaaaggcaaaaggagaaacactgcogaaacagocggaactgattgtctatgcagaa 1020

Query: 962 cctgtogcacaacogctogcgcacogtctgtctcaaaagacoggcagocgatatgcoggc 1021
 |||||||
 Sbjct: 1021 cctgtogcacaacogctogcgcacogtctgtctcaaaagacoggcagocgatatgcoggc 1080

Query: 1022 aaagaocgacocgattatttgggcaaaactccattocga 1059
 |||||||
 Sbjct: 1081 aaagaocgacocgattatttgggcaaaactccattocga 1118

Neisseria meningitidis serogroup B
 >NmeningitidisM58:gi_7226166_944053_942857_hypothetical protein
 Length = 1197
 Score = 2042 bits (1030), Expect = 0.0
 Identities = 1051/1058 (99%)
 Strand = Plus / Plus

Query: 2 ggcagcaaaacogaaacagcccaagctogactaccaaaagcoggtgcacogcctgatcaaa 61
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 Sbjct: 130 ggcagcaaaacogaaacagcccaagctogactaccaaaagcoggtgcacogcctgatcaaa 189

Query: 62 cttgaagtcccaactgatttgaacaaaccccgacccaaggaacactctacogcctgocgtgc 121
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 Sbjct: 190 cttgaagtcccaactgatttgaacaaaccccgacccaaggaacactctacogcctgocgtgc 249

Query: 122 ggttcggggcogcgtcoggcgcagcaatttggaaaaacgcgcacacccacogtcccaacag 181
 |||||||
 Sbjct: 250 ggttcggggcogcgtcoggcgcagcaatttggaaaaacgcgcacacccacogtcccaacag 309

Query: 182 cctgcogatgcogaagtattgaaaaagcgtcaaaaggtgtcogcctogagcogcagcgcagc 241
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 Sbjct: 310 cctgcogatgcogaagtattgaaaaagcgtcaaaaggtgtcogcctogagcogcagcgcagc 369

Query: 242 caaogctggctogttgtogacggcaagtctoctgcoogaaatctggcogctoctgaaagoc 301
 |||
 Sbjct: 370 caaogctggctogttgtogacggcaagtctoctgcoogaaatctggcogctoctgaaagoc 429

Query: 302 ttttggcaggaaaaacggcttogacatcaaatcogaagaacccogcatoggacaaagaa 361
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 Sbjct: 430 ttttggcaggaaaaacggcttogacatcaaatcogaagaacccogcatoggacaaagaa 489

Query: 362 aocgagtgaggggaaaaacogogccaaaatcccccaagacagcttgogocogctcttogac 421
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 Sbjct: 490 aocgagtgaggggaaaaacogogccaaaatcccccaagacagcttgogocogctcttogac 549

Query: 422 aaagtoggcttggggcgcatctactccacoggcgagcgogacaaattcatogtcogtatc 481
 |||
 Sbjct: 550 aaagtoggcttggggcgcatctactccacoggcgagcgogacaaattcatogtcogtatc 609

Query: 482 gaacaggggcaaaaaacgggtttcogacatcttcttoggccacaaagocataagaaagtg 541
 |||
 Sbjct: 610 gaacaggggcaaaaaacgggtttcogacatcttcttoggccacaaagocataagaaagtg 669

Query: 542 taoggogggcaaaagacaaagacagacogctatggcagocctccocogtoogataccaaocct 601
 |||
 Sbjct: 670 taoggogggcaaaagacaaagacagacogctatggcagocctccocogtoogataccaaocct 729

Query: 602 gaagcogctttctgaocgocctttatgcaatatttgggogttgaoggaacagcaggogaa 661
 |||
 Sbjct: 730 gaagcogctttctgaocgocctttatgcaatatttgggogttgaoggaacagcaggogaa 789

Query: 662 aaogcatogggcaaaaaaacctacoccttccogcogocaaogaaatggogogtatogaagc 721
 |||
 Sbjct: 790 aaogcatogggcaaaaaaacctacoccttccogcogocaaogaaatggogogtatogaagc 849

Query: 722 aaaagocctgattgtctttgggogactaoggcagaaaactgggogcgacogctgctogcocc 781
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 Sbjct: 850 aaaagocctgattgtctttgggogactaoggcagaaaactgggogcgacogctgctogcocc 909

Query: 782 gacogcatogggctgacogctogtoggtaaaaacacoggaacogcogcctctcgtgctcaa 841
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 Sbjct: 1030 ctgggcaaaaggcaaaaggagaaaacctgcogaacacagcoggaactgattgtctatgcagaa 1089

Query: 962 octgtogocaaagcogctogcgatogtctgctcaacaaagaogggcagcgatagcoggc 1021
 |||
 Sbjct: 1090 octgtogocaaagcogctogcgatogtctgctcaacaaagaogggcagcgatagcoggc 1149

Query: 1022 aaagaogcatcogcattattggggcaaaactccattcoga 1059
 |||
 Sbjct: 1150 aaagaogcatcogcattattggggcaaaactccattcoga 1187

Neisseria gonorrhoeae

>Neisseria gonorrhoeae FA1090.crf928 922099 923526 PIR:CB1141

 hypothetical protein NM80928 [imported] - Neisseria
 meningitidis (group B strain MD58)
 Length = 1428

Score = 1685 bits (850) , Expect = 0.0
 Identities = 1006/1058 (95%)
 Strand = Plus / Plus

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Query: 2      ggcagcaaaacogaacagcccaagctogactaccaagcgggtogacagcogctgataaaa 61
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Sbjct: 364    ggcagcaaaacogaacagcccaagctogactaccaagcgggtogacagcogctgataaaa 423

Query: 62      cttgaagtcccaectgatttgaacaaccccgacacaggcaaacctctacogcctgctgcgc 121
             || |||
Sbjct: 424    ctcgaagtcccgctgatttgaacaaccccgacacaggcaaacctctacogcctgctgcgc 483

Query: 122     ggttcggggcgccgtccgcgccagcaatttggaaaaacgcgcacacccacogtccaacag 181
             |||
Sbjct: 484    ggttcggggagcgtccgcgccagcatttggaaaaacgcgcacacccacogtccaacag 543

Query: 182     cctgcogatgcgaagatttgaaaagcgtcaaaaggtgtccgcctcgagcgcgacggcagc 241
             |||
Sbjct: 544    ccagcogatgcgaagatttgaaaagcgtcaaaaggtgtccgcctcgagcgcgacggcagc 603

Query: 242     caaogctggctogttgtogacggcaagtctcctgcogaaatctggcogctcctgaaagcc 301
             |||
Sbjct: 604    caaogctggctgtgtgtgaacggcaaatcccccgcogaaatctggcogctcctgaaagcc 663

Query: 302     ttttggcaggaaaaacggcttgcacatcaaatccgaagaacccgccatoggacaaaaaggaa 361
             |||
Sbjct: 664    ttttggcaggaaaaacggcttgcacatogaatccgaagaacccgccatoggacaaaaggaa 723

Query: 362     acogagtgggggaaaaacogcgccaaaaatcccccaagacagcttgogcogcctcttcgac 421
             |||
Sbjct: 724    acogagtgggggaaaaacogtgccaaaaatcccccaagacagcttgogcogcctattcgac 783

Query: 422     aaagtoggcttggggggcattctactccacogggagagcgacaaaattcatogtcogtatc 481
             |||
Sbjct: 784    acagtoggcttggggggcattctactccacogggagagcgacaaaattcatogtcogtatc 843

Query: 482     gaacaggggcaaaaaacgggtttccgacatctttcttgcgccacaaagccatgaaagaagtg 541
             |||
Sbjct: 844    gaacaggggcaaaaaacgggtttccgacatctttcttgcgccacaaagccatgaaagaagtg 903

Query: 542     tacgggggcaaaagacaaagacacgacogtatggcagccctcccgctccgatcccaacctc 601
             |||
Sbjct: 904    tatggggacaaaaacaaagacacgacacgatggcagccctcccgctccgatcccaacctc 963

Query: 602     gaagcogctttctgaogcgttttatgcaattattgggggttgaaggacagcaggcgaa 661
             |||
Sbjct: 964    gagcogctttctgaogcgttttatgcaattattgggggttgaaggacagcaggcgaa 1023

Query: 662     aacgcattggcaaaaaaacctacccctcccgccgcacaaagaaatggcgogtatcgaagc 721
             |||
Sbjct: 1024    aacgcattggcaaaaaaacctacccctcccgccgcacaaagaaatggcgogtatcgaagc 1083

```

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Query: 722 aaaagcgtgattgtctttggcgactacggcagaaaactggcggcgacogtgcogcoctc 781
 ||||||||||||||||||||||||||||||||||||||||| || |||||
 Sbjct: 1084 aaaagcgtgattgtctttggcgactacggcagaaaactggcggcgacogtgcogcoctc 1143

Query: 782 gacgcgatcgggctgacogtgcogtgcggcaaaaacacogaaogccacogcttctgggtcaa 841
 ||||||||| ||||||||||||||||||||||||||||||||||||||||| |||||
 Sbjct: 1144 gacgcgatcgggctgacogtgcogtgcggcaaaaacacogaaogccacogcttctgggtcaa 1203

Query: 842 aaagcccgaaacgaaagcaatgcagttacogaacaaaaacccggcctgttcaaaogcctg 901
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 Sbjct: 1204 aaagcccgaaacgaaagcaatgcagttacogaacaaaaacccgggctgttcaaaogccta 1263

Query: 902 ctgggcaaaaggcaaaagcggagaaaacctgcogaacagcoggaaactgattgtctatgcagaa 961
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 Sbjct: 1264 ctgggcaaaaggcaaaagcggagaaaacctgcogaacagcoggaaactgattgtctatgcogag 1323

Query: 962 cctgtgcgaacgcgtgcgcgatcgtcctgtctcaacaaagaoggcagogcatatgcoggc 1021
 ||||||||| ||| |||||||||||||||||||||||||||||||||||||||||
 Sbjct: 1324 cctgtgcgaacgcgttcgcgatcgtcctgtctcaacaaagaoggcagogcatatgcoggc 1383

Query: 1022 aaagaogcatcogcattattgggcaaaactccattooga 1059
 ||||||||||||| || |||||||||||||
 Sbjct: 1384 aaagaogcatcogcactgttaggcaaaactccattooga 1421

Figure 9

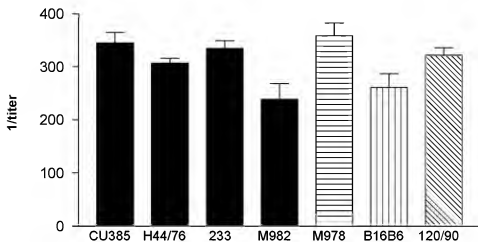


Figure 10

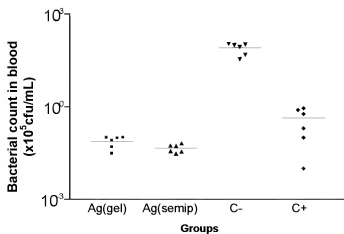


Figure 11

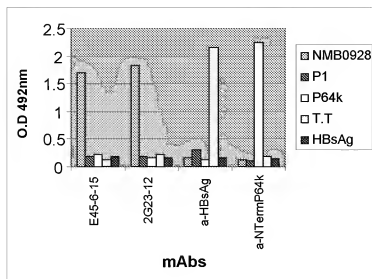


Figure 12

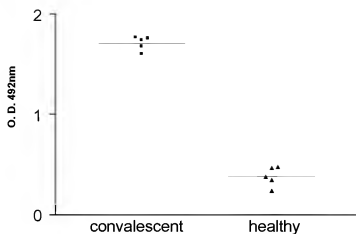


Figure 13